

MELAKA
INTERNATIONAL
INTELLECTUAL EXPOSITION

MIIEX'24

12 JUNE '24

Dewan Taming Sari,
Universiti Teknologi MARA Caw. Melaka,
Kampus Alor Gajah, Melaka

*"Empowerment of Special
Needs through Invention
& Innovation"*

**EXTENDED
ABSTRACT**

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

**“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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UiTM Cawangan Melaka

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78000 Alor Gajah

Melaka Bandaraya Bersejarah

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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

**“EMPOWEREMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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FOREWORD BY THE RECTOR OF UiTM CAWANGAN MELAKA



Professor Ts. Dr. Mohd Rasdi bin Zaidi

Rector, Universiti Teknologi MARA (UiTM)

Cawangan Melaka

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honour for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

2024 is a special year where MIIEX 2024 emphasizes the development of special needs. As we know, special needs indicate a limitation in a person's ability to engage in and benefit from various aspects, such as daily activities and education. Hence, with the theme "Empowering Special Needs Through Invention and Innovation," it is a platform for industries, professionals, academicians, students, and communities to share their innovative ideas and products to increase accessibility for those with special needs.

The successful implementation of MIIEX '24 is our joint success. This event was supported by the Melaka state government through YB Datuk Fairul Nizam bin Roslan, the EXCO of Science, Technology, Innovation, and Digital Communication. I also want to express my

gratitude to Universitas Negeri Padang, Indonesia, Universitas Muhammadiyah, Makassar, Indonesia, the International Association of Economic and Businesses (IAEB), Universiti Sains Islam Malaysia, Ibnu Umri Maktum Research Center (UMMI), USIM, and The Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) as our co-collaborators for MIIEX 2024.

The collaboration from various parties in MIIEX '24 is a platform that will improve cooperation and interweaving among industries, professionals, academicians, students, and communities in shaping their potential in developing innovation products. This exposition also serves as a platform to cultivate and uphold the nation's innovation culture by presenting new ideas and research by young people, especially from academia and universities. Indirectly, MIIEX '24 will encourage all inventors towards empowering Science, Technology, Engineering, and Mathematics (STEM), especially in primary and secondary schools.

The new digital landscape also inspires more innovation and new ideas that contribute to various activities, such as business and industries. As a university that encourages "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

FOREWORD BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)



Associate Professor. Dr. Nur Hayati binti Abd Rahman

Deputy Rector (Research & Industrial Linkages), Universiti Teknologi MARA (UiTM) Cawangan Melaka

With much passion and privilege, let me warmly welcome all of you to the Melaka International Innovation Exhibition (MIIEX), UiTM Cawangan Melaka's flagship event. I firmly believe that events such as these demonstrate the gradual evolution of this platform in terms of its significance and its governing principles within the sphere of learning and the broader scholarly society.

The theme for this year, "Empowering Special Needs Through Invention and Innovation," strongly connects to our mission of using research and technology to make a positive impact on the world we live in. Besides enforcing the message of diversity, this theme also reaffirms our focus on creating products to improve the lives of people with disabilities (PWDs). Such innovations are vital as only through focused constructive changes can society become more sensitive to the needs of all members.

MIIEX allows researchers, students, and industry professionals to come together, share their innovative research, and develop viable research partnerships. It has been great to see the enthusiasm of the participants and the efforts they put into their projects, which can offer various social and economic benefits. This is why one can state that MIIEX is a great

opportunity for creating connections between the academic environment and industry, facilitating the implementation of innovative and promising projects.

Finally, I would like to express my sincere appreciation to all the members and supporters of the organizing committee, all the participants, sponsors, and everyone involved in preparing this event. I want to express my gratitude for your commitment and involvement, as the success of MIIEX and the development of an active culture of innovation in our university and beyond is partly owed to your support.

Thank you

FOREWORD BY THE PROJECT DIRECTOR



Dr Zulkefli bin Muhamad Hanapiyah

Senior Lecturer

Assalamualaikum and Warmest Greetings,

It gives me a great pleasure, on behalf of the organizing committee, to welcome all participants and speakers to the Melaka International Intellectual Exposition 2024 (MIIEX '24) with the theme "Empowering Special Needs Through Invention and Innovation." We are honoured and pleased to welcome all participants to this biennial event.

MIIEX '24 is a platform that gathers experts from local and international industries, academia, scientists, researchers, and the community to contribute to the advancement of scientific and technological knowledge. This knowledge helps develop disruptive innovation products that improve daily activities for businesses and the community, especially those with special needs.

MIIEX '24 provides an atmosphere for inventors of all levels to gain new exposure and collaborate. Indirectly, this promotes a collaborative and innovative culture that focuses on cutting-edge technologies and new standards in technology and creativity.

MIIEX '24 is anticipated to serve as an arena for participants to acquire and disseminate revolutionary information on ideas and innovation. It is intended that the competition will expose the contestants' minds to the latest technologies and designs, aligning with the government's goal of encouraging innovation in Malaysia.

Finally, I want to compliment my fellow committee members on their amazing efforts, which were vital to the event's success. In addition, I want to thank our co-organizers, event sponsors, and participants. Optimistically, we hope that all new knowledge discovered, invented, or innovated will lead us toward future sustainability.

Thank you.

**FOREWORD BY MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY,
INNOVATION AND DIGITAL COMMUNICATIONS**



YB Datuk Fairul Nizam bin Roslan

Melaka State Exco of Science, Technology, Innovation and Digital Communications

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honor for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

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Thank you.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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	DR NORASHIKIN ADAM
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	AFZAN SAHILLA BINTI MOHD AMIR HAMZAH
	MUHAMMAD FURQAN BIN AZHAR
	KHAIRUL AZHAR BIN LOCHMAN

ABOUT MIIEX'24

MIIEX'24 is an innovation competition annually organised by UiTM Melaka with the intention to bring together ideas and inspiration that could fit in for commercialization needs.

This event creates a platform for researchers to establish networking, partnership and opportunities to collaborate with industries.

OBJECTIVES

1. Encourage and instil passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skilful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

THEME

‘EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION’

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***Blow Wave Pro**

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Abstract

This format is to be used for submissions that are published in the eMonograph of MIIEX 2024. We wish to give this eMonograph a consistent and high-quality appearance. We therefore ask authors to follow some simple guidelines. In essence, you should format your abstract exactly like this document. The easiest way to do this is simply to download a template from the conference website and replace the content with your own material. *The abstract should not be more than 300 words each. Abstract should include problem statement, objectives, novelty, impact/usefulness and potential for commercialization.*

Keywords: Blow dryer, Serum infusion, Efficient styling , Hair health

1. INTRODUCTION

The Comb Hair Dryer with Serum is a new tool that incorporates a serum dispenser into the comb attachment of the dryer. We already find the problem before we create this product which is Small Battery Capacity. Frequent use may quickly drain the battery, leading to interruptions during styling sessions and requiring frequent recharges. The solution is we make large battery capacity. The large battery capacity provided can help users to prepare and facilitate their affairs and can be used for a long time. The second problem is Electrical Dependency. Reliance on an electrical connection restricts the device's usability to areas with power outlets. The solution is we make this product as wireless so that consumers can use this product anywhere without having to find a plug. Lastly is Serum Dispensing Inconvenience. The design of the serum dispenser may lead to clogging and inconsistent distribution, hindering the device's ability to deliver nourishing benefits effectively. So we discuss to solve this problem with make the convenience

product . Our product's consumers doesn't have to make a lot of step to do their haircare routine. To strengthen our statement, we also include a proof for it

2. OBJECTIVE

Blow Wave Pro is an innovative product. It is because we create a multifunctional tool for hair. Our product provides 3 functions in 1 tool which is for straightening, moisturizing, and drying our hair. The objective of our product is to make people's daily affairs easier. Based on the function of our product, it is no longer denied that people do not have to use a lot of hair products to take care of their hair. Not only that, but it is also saving people's time and money. The reason why our product saves time is because consumers does not need to change to another hair product to dry their hair nor to straighten their hair with this way people no need to rush to get ready to go to work or to college. Other than that, our product does not need to use electricity, which can save our money from paying high amount electric bill. Finally, our product is easier for people to bring anywhere because it is compact size and lightweight compared to other products on the market that come with heavier and huge sizes that can cause difficulty to bring anywhere.

3. NOVELTY & INVENTIVENESS

When it comes to hair care, a hair dryer with a serum application mechanism can be revolutionary. Temperature sensors and automated shut-off mechanisms are examples of built-in safety elements that would guarantee dependable and secure functioning. These safeguards would prevent malfunctions or overheating of the gadget and the user. Aside from that, the hair dryer comb could have a range of treatment settings catered to particular hair issues, such moisture, repair, or frizz control. To meet various needs, each mode could provide a special mix of heat, ventilation, and serum application. Finally, a detachable comb design would provide hygienic serum application with every use and make cleaning and maintenance easier. It is possible to remove the comb attachment for a thorough cleaning or to replace it if necessary. Last but not least, this product also have time saving convenience. By combining the functions of a hair dryer and a serum dispenser into one device, users can streamline their hair care routine, saving time and effort. The all-in-one design eliminates the need to use multiple tools and products separately, making styling more efficient and hassle-free.

4. PRACTICALITY & USEFULNESS

A comb hair dryer with serum infusion combines the functions of a hair dryer and a serum dispenser into one device, streamlining the hair care routine. It saves time and effort by allowing users to achieve multiple goals simultaneously. The even distribution of serum during the drying process ensures that the hair receives consistent nourishment, resulting in improved health, reduced frizz, and enhanced manageability. It empowers individuals to effortlessly attain salon-quality results at home.

5. CONCLUSION

To sum up, the Comb Hair Dryer with Serum combines the features of a hair dryer and a serum application into a single, handy gadget, providing a cutting-edge approach to hair care. Its ability to quicken the hair care routine and save time while producing professional grade at home is testament to its practicality and utility. This creative gadget guarantees uniform application of nourishing serum, boosting hair health and shine and limiting heat damage and frizz by integrating a serum dispenser inside the comb attachment. Its wireless functionality and small size further increase its usefulness by giving customers previously unheard-of mobility while styling. In summary, the Comb Hair Dryer with Serum is a highly adaptable, easy to use, and essential tool for any styling collection that is transforming the way we take care of our hair

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